

Rodney M. Goodman et al.
Application No.: 10/054,550
Page 2

PATENT

Please cancel claims 1-34 without prejudice, amend claims 35-36, and add new claims 40-50 as follows:

Claims 1-34 (canceled)

112
B1
✓ Claim 35. (currently amended) A method of forming an analyte detection sensor on a substrate, the method comprising:
forming a first ^{metal} conductive layer over the substrate;
forming a first insulating layer over the first conductive layer;
patterning and etching a sensor well in the ^{metal} first conductive layer; and
forming a sensor material in the sensor well, wherein the sensor material has an electrical property that changes in the presence of an analyte.

✓ Claim 36. (currently amended) The method of claim 35 further comprising:

forming a second conductive layer over the first insulating layer.

Claim 37. (previously added) The method of claim 36 further comprising:

forming a passivation layer over the second conductive layer.

Claim 38. (previously added) The method of claim 35 wherein:
the sensor material comprises regions of a nonconductive organic material and a conductive material.

Claim 39. (previously added) The method of claim 35 wherein forming a sensor material in the sensor well further comprises:
applying a fluid to the sensor well using a jet system.

32
Claim 40. (new) The method of claim 35 wherein the first conductive layer is a metal layer.

lacking
method step

Rodney M. Goodman et al.
Application No.: 10/054,550
Page 3

PATENT

→ Claim 41. (new) The method of claim 37 wherein the first conductive layer is formed on a second insulating layer, and the second insulating layer is formed on a polysilicon layer.

→ Claim 42. (new) The method of claim 41 wherein the first and the second insulating layers are oxide layers; and the second and the third conductive layers are metal layers.

→ Claim 43. (new) The method of claim 41 wherein the passivation layer is a glass layer.

Claim 44. (new) The method of claim 35 wherein the first conductive layer is coupled to preprocessing circuitry including an autozeroing amplifier that adapts out low frequency components of output signals from the sensor.

✓ Claim 45. (new) A method of forming an array of analyte detection sensors on a substrate, the method comprising:

forming a first conductive layer over the substrate;
forming a first insulating layer over the first conductive layer;
patterning and etching sensor wells in the first conductive layer; and
applying compositions of sensor material in each of the sensor wells to form the sensors, wherein the sensor material has an electrical property that changes in the presence of an analyte.

✓ Claim 46. (new) The method of claim 45 further comprising:
forming a second conductive layer over the first insulating layer.

✓ Claim 47. (new) The method of claim 46 further comprising:
forming a passivation layer over the second conductive layer.

Claim 48. (new) The method of claim 45 wherein:

Rodney M. Goodman et al.
Application No.: 10/054,550
Page 4

PATENT

the compositions of sensor material in each sensor well comprise regions of nonconductive organic material and conductive material.

Claim 49. (new) The method of claim 45 wherein:

the sensor material in each sensor well having a different composition than the sensor material in every other one of the sensor wells.

32
Claim 50. (new) The method of claim 45 wherein:

the sensor material in a subset of the sensor wells having the same composition of sensor material.
